

## ANDREA DESIDERATO

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### WORK EXPERIENCE

**Assistant Professor** **July 2023 - present**  
University of Lodz, Poland

**Forensic auxiliary marine biologist** **February 2023 - present**  
FAPAB (Forensic Anthropology, PAleopathology and Bioarchaeology) Research Center, Catania, Italy  
Taphonomic description and characterization of remains found in brackish/marine environments.

**Postdoc position** **July 2021 – July 2023**  
University of Lodz, Poland  
Couple behavioural, physiological, modelling, and transcriptomic data to evaluate the possible different invasive potential of two genetically distinct lineages of the amphipod *Dikerogammarus villosus* in European freshwater bodies.

**Researcher (visiting scientist)** **September 2022- November 2022**  
Queen's University Belfast, Belfast, Poland  
Functional response analyses, InvaCost database exploration, and evaluation of the cost of the invasive species of the marine and brackish fouling communities.

**Researcher (visiting scientist)** **October 2018 - August 2019**  
AWI, Bremerhaven, Germany  
Genetic and functional analyses of fouling amphipods. Main tasks: DNA extraction and amplification of selected markers, biostatistical analyses of ecological data related to functional traits.

**Researcher** **January 2016 - July 2016**  
Biology Department, University of Bari, Bari, Italy  
Zoobenthic community characterization of the Mar Piccolo di Taranto, with a special focus on the species with conservation interest.

**Research collaborator** **September 2015 - January 2016**  
CONISMA, Bari, Italy  
Scientific technical activity for deepening the knowledge of relevant environmental aspects related to the Basin of Taranto.

### EDUCATION

**PhD in Zoology** **March 2017 - December 2020**  
Federal University of Paraná, Curitiba, Brazil  
Amphipod fouling: diversity, biogeography and drivers of an understudied community.  
Supervisor: Prof. Dr. Maria Angelica Haddad, Co-supervisor: Dr. Jan Beermann

**Master degree in Marine Biology, 110/110 cum laude** **November 2013 - October 2015**  
University of Bologna, Ravenna, Italy  
Phylogeny and phylogeography of the family Hyalidae (Crustacea: Amphipoda) along the northeast Atlantic coasts.  
Supervisor: Prof. Dr. Marco Abbiati, Co-supervisor: Prof. Dr. Henrique Queiroga

**Bachelor degree in Natural Sciences, 110/110 cum laude** **October 2010 - July 2013**  
University of Bari, Bari, Italy  
Abundance, distribution and habitat of *Hippocampus guttulatus* and *H. hippocampus* in the Mar Piccolo di Taranto.  
Supervisor: Prof. Dr. Giuseppe Corriero, Co-supervisor: Dr. Michele Gristina

**Erasmus LLP** **September 2011 - January 2012**  
University of Coimbra, Coimbra, Portugal

### CAMPAIGNS

2023 XPRIZE Rainforest Semifinal, Central Catchment, Singapore (3 days)

2022 Freshwater invertebrates in Finland (UŁ) (5 days)

2022 Sampling of *Sabellaria* and eDNA along the Adriatic Sea (UĒ'IDUB) (10 days)

2021 Freshwater macroinvertebrates of Vistula and Oder (UĒ) (14 days)

2019 Oceanographic campaign in the North Sea for sampling of benthos fauna (AWI) (14 days)

2017 Coastal benthic fauna in South Brazil (UFPR) (12 days)

2016 Campaign in the "Ritmare" project for the underwater sampling of benthic habitat in Tremiti islands (CONISMA) (10 days)

2015-2016 Underwater mapping of Mar Piccolo di Taranto (CONISMA) (several 2-3 days)

2014 Oceanographic campaign in the Adriatic Sea for the project "COCOMAP2014" (CNR-ISMAR) (10 days)

## PUBLICATIONS

1. **Desiderato A.** & Mastrototaro F. (2022). The Mediterranean parrotfish (*Sparisoma cretense*) ascends the Adriatic Sea. *Zoology and Ecology*. DOI: 10.35513/21658005.2022.2.5. (*Corresponding author*)
2. Vieira P., **Desiderato A.**, Azevedo S.L., Esquete P., Costa F.O., Queiroga H. (2022). Molecular evidence for extensive discontinuity between peracarid (Crustacea) fauna of Macaronesian islands and nearby continental coasts: over fifty candidate endemic species. *Marine biology*. DOI: 10.1007/s00227-022-04051-w
3. Mikac B., Abbiati M., Adda M., Colangelo M.A., **Desiderato A.**, Pellegrini M., Sacconi C., Turicchia E., Ponti M. (2022). The environmental effects of the innovative ejectors plant technology for the eco-friendly sediment management in harbors. *Journal of Marine Science and Engineering*. DOI: 10.3390/jmse10020182
4. Mucciolo S., **Desiderato A.**, Salonna M., Mamos T., Prodocimo V., Di Domenico M., Mastrototaro F., Lana, P., Gissi C., Calamita, G. (2021). Finding aquaporins in annelids: an evolutionary analysis and a case study. *Cells*. DOI: 10.3390/cells10123562
5. **Desiderato A.**, Mamos T., Rewicz T., Burzynski A., Mucciolo S. (2021). First glimpse at the diverse aquaporins of amphipod crustaceans. *Cells*. DOI: 10.3390/cells10123417. (*Corresponding author*)
6. Mucciolo S., **Desiderato A.**, Miranda Leal S., Mastrodonato M., Lana P., Arruda Freire C. (2021). Variability in the degree of euryhalinity in neotropical estuarine annelids. *Journal of Experimental Marine Biology and Ecology*. DOI: 10.1016/j.jembe.2021.151617
7. **Desiderato A.**, Beermann J., Haddad M.A., Fernandes L.F. (2021). Diatom epibionts on amphipod crustaceans: a possible vector for co-introductions? *Water*. DOI: 10.3390/w13162227. (*Corresponding author*)
8. Conlan K., **Desiderato A.**, Beermann J. (2021). *Jassa* Leach (Amphipoda: Ischyrocerini): a new morphological and molecular assessment of the genus. *Zootaxa*. DOI: 10.11646/zootaxa.4939.1
9. Hupaló K., Majaneva M., Czachur M.V., Sire L., Marquina D., Lijtmaer D.A., Ivanov V., Leidenberger S., Ciampor Jr F., Ciamporova-Zatovicova Z., Mendes I.S., **Desiderato A.**, Topstad L., Meganck K., Hariz D.Z.A., Kjørstad G., Lin X., Price B., Stevens M., Ekrem T., Deiner K. (2020). An urban blitz with a twist: rapid biodiversity assessment using aquatic environmental DNA. *Environmental DNA*. DOI:10.1002/edn3.152
10. Beermann J., Hall-Mullen A.K., Havermans C., Coolen J.W.P., Croijmans R.P.M.A., Dibbitts B., Held C., **Desiderato A.** (2020). Ancient globetrotters-connectivity and putative native ranges of two cosmopolitan biofouling amphipods. *PeerJ*. DOI:10.7717/peerj.9613
11. Pierri C., Lazic T., Corriero G., Cardone F., Tarantini S.O., **Desiderato A.**, Mirto S., Gristina M. (2020). Site fidelity of *Hippocampus guttulatus* Cuvier, 1829 Mar Piccolo of Taranto (Southern Italy: Ionian Sea). *Environmental Biology of Fishes*. DOI:10.1007/s10641-020-01008-0
12. **Desiderato A.**, Barbeitos M.S., Gilbert C., Da Lage J.C. (2020). Horizontal transfer and gene loss shaped the evolution of alpha-amylases in bilaterians. *G3- Genes Genome Genetics*. DOI:10.1534/g3.119.400826
13. Myers A.A., **Desiderato A.** (2019). A new genus and species of Aoridae (Amphipoda, Senticaudata), *Propejanice lagamarensis* gen. nov. sp. nov. from Brazil. *Zootaxa*. DOI: 10.11646/zootaxa.4629.2.11
14. **Desiderato A.**, Serejo C.S., Abbiati M., Costa F.O., Queiroga H., Vieira P. (2019); Macaronesian islands as promoters of diversification in amphipods: the remarkable case of the family Hyalidae (Crustacea, Amphipoda). *Zoologica Scripta*. DOI: 10.1111/zsc.12339 (*Corresponding author*)
15. Vieira P., **Desiderato A.**, Holdich D., Soares P., Creer S., Carvalho G., Costa F.O., Queiroga H. (2019); Deep segregation in the open ocean: Macaronesia as an evolutionary hotspot for low dispersal marine invertebrates. *Molecular Ecology*. DOI: 10.1111/mec.15052
16. Lazic T., Pierri C., Gristina M., Carlucci R., Cardone F., Colangelo P., **Desiderato A.**, Mercurio M., Bertrandino M. S., Longo C., Carbonara P., Corriero G. (2018); Distribution and habitat preferences of species along the Apulian coast. *Aquatic Conservation-Marine and Freshwater ecosystems*. DOI: 10.1002/aqc.2949
17. Gristina M., Cardone F., **Desiderato A.**, Mucciolo S., Lazic T., Corriero G. (2016); Habitat use in juvenile and adult life stages of the sedentary fish *Hippocampus guttulatus*. *Hydrobiologia*. DOI: 10.1007/s10750-016-2818-3
18. Corriero G., Mercurio M., Mastrototaro F., Cardone F., **Desiderato A.**, Longo C., Pierri C., Chimienti G., Tursi A. Relazione finale del Programma di monitoraggio di cui al POA della convenzione tra il M.A.T.T.M. e le Agenzie Regionali per la Protezione dell'Ambiente, Sottoregione Mare Adriatico, Regione Puglia, Modulo 7 - Habitat a coralligeno, Modulo 8 - Fondi a Maérl. Final report, BARI, Italy. 2016

## POSTERS AND PRESENTATIONS

1. Mucciolo S., Rewicz T., Martin-Duran J.M., **Desiderato A.**; Variability in euryhalinity of two Ponto-Caspian invasive annelid species. Oral presentation at the 14th International Polychaetes Conference, Stellenbosch, South Africa. 2023
2. **Desiderato A.**; Small crustaceans in conservation biology: barcoding, fouling and bioinvasion. Invited seminar at the Queen's University of Belfast (Northern Ireland, UK). 14/10/2022
3. **Desiderato A.**, Jermacz Ł., Podwysoki K., Kobak J., Bączela-Spychalska K., Rewicz T.; Breath in, breath out: different physiological responses to oxygen and temperature variation of two genetically distinct lineages of *Dikerogammarus villosus*. Oral presentation at the 12th International Conference on Biological Invasions (Neobiota), Tartu, Estonia. 2022
4. **Desiderato A.**; Amphipod fouling: diversity, biogeography and drivers of an understudied community. Oral Presentation at the Brazilian Carcinology Society (CBC) and the Crustacean Society - summer meeting (TCS), Brazil/online. 2022
5. **Desiderato A.**, Copilas-Ciocianu D., Zhang Z., Bączela-Spychalska K., Grabowski M., Rewicz T.; A race against time: comparative and integrated molecular species distribution models to counter Ponto-Caspian species invasion. Oral Presentation at the 22nd International Congress on Aquatic Invasive Species (ICAIS), Oostende, Belgium. 2022
6. **Desiderato A.**, Beermann J., Haddad M.A., Fernandes L.F.; Hidden in plain sight: diatoms epibionts of amphipods as an overlooked case of cointroduction? Poster presented at the XXXIII Congresso Brasileiro de Zoologia, Aguas de Lindoia, São Paulo, Brasil. 2020
7. **Desiderato A.**, Haddad M.A., Havermans C., Held C., Beermann J.; Fouling amphipods, testing correlations with port effect and salinity gradient while facing taxonomic impediment. Oral presentation at the 18<sup>th</sup> International Colloquium on Amphipoda, Dijon, France. 2019
8. Vieira P.E., **Desiderato A.**, Costa F.O., Queiroga H.; Distribution patterns of amphipod assemblages along the Iberian Atlantic rocky shores. Poster presented at the 18<sup>th</sup> International Colloquium on Amphipoda, Dijon, France. 2019
9. Ponti M., Tarullo A., Mikac B., **Desiderato A.**, Zanni P., Airoldi L., Abbiati M.; Can environmental gradients promote non-indigenous species recruitment? The case study of the Ravenna channel-port. 54<sup>th</sup> European Marine Biology Symposium, Dublin, Ireland. 2019
10. **Desiderato A.**, Haddad M.A., Havermans C., Held C., Beermann J.; Barcoding marine fouling crustaceans from Brazil: new insights into bioinvasion and cryptic diversity. Lightning talk and poster presented at the 8<sup>th</sup> International Barcode of Life Conference, Trondheim, Norway. 2019
11. Vieira P.E., **Desiderato A.**, Azevedo S.L., Costa F.O., Queiroga H.; Prominent evolutionary divide between Macaronesian islands and nearby continental coasts in multiple peracarids (Crustacea): over 60 suspected new species. Oral presentation at the 8<sup>th</sup> International Barcode of Life Conference, Trondheim, Norway. 2019
12. **Desiderato A.**, Beermann J., Haddad M.A.; Crustacean fouling communities along Southern Brazilian coasts - functionality, connectivity and possible implications for marine bioinvasions. Oral presentation at the 9<sup>th</sup> International Crustacean Congress, Washington, DC, USA. 2018
13. **Desiderato A.**, Mucciolo S., Turicchia E., Ponti M., Krapp-Schickel T.; *Parametopella cypris* (Amphipoda: Stenothoidae), a new sneaky alien in a north Adriatic lagoon. Poster presented at the 9<sup>th</sup> International Crustacean Congress, Washington, DC, USA. 2018
14. Oliveira L., M., Rocha R. M., Barbeitos, M., **Desiderato A.**; Taxonomia integrativa e delimitação das espécies *Didemnum calliginosum*, *D. cineraceum* e *D. vanderhorsti* (Ascidiacea: Didemnidae). Oral presentation at the XXXII Congresso Brasileiro de Zoologia, Foz do Iguaçu, Brazil. 2018
15. **Desiderato A.**, Vieira P. , Costa F.O., Queiroga H.; Macaronesian islands as drivers of evolutionary diversification of two different peracaridean morphospecies. Oral presentation at the 13<sup>th</sup> Brazilian Congress of Ecology and 3<sup>rd</sup> International Symposium of Ecology and Evolution, Viçosa, Brazil. 2017
16. **Desiderato A.**, Beermann J., Haddad M.A.; Vagile fouling communities, their connectivity along southern and southeastern Brazilian coasts and implications for marine bioinvasions. Oral presentation at the 3<sup>rd</sup> Simposio de Zoologia, Curitiba, Brazil. 2017
17. Corriero G., Longo C. **Desiderato A.**, Pierri C., Mercurio M.; Preliminary data on the presence of *Pinna nobilis* (Mollusca, Bivalvia) in an Apulian coastal bay (Ionia Sea, Italy). Poster presented at the 1<sup>st</sup> Congresso nazionale congiunto, SITE-UZI-SIB, Milano, Italy. 2016
18. **Desiderato A.**, Vieira P., Serejo C.S., Krapp-Schickel T., Abbiati M., Costa F.O., Queiroga H.; First insights into phylogenetic relationships among the Atlantic and Mediterranean species of the family Hyalidae. Oral presentation at the 16<sup>th</sup> International Colloquium on Amphipoda, Aveiro, Portugal. 2015
19. Corriero G., Bertrandino S., Cardone F., **Desiderato A.**, Mercurio M., Pierri C., Longo C., Carlucci R., Carbonara P., Gristina M.; Preliminary data on *Hippocampus guttulatus* (Syngnathidae) from the Apulian coast. Poster presented at the 75<sup>th</sup> UZI, Bari, Italy. 2014
20. Gristina M., Corriero G., Cardone F., **Desiderato A.**, Passaretli S., Castellano L.; Nursery area of *Hippocampus guttulatus* in a focal point of the Mar Piccolo di Taranto (Apulia - Ionian Sea). Poster presented at Faro, Portugal. 2013

#### INVITED SEMINARS, LECTURES, AND COURSES

*La tafonomia in ambito marino: Resti passati in un canale siciliano [Taphonomy in marine environment: Past remains in a Sicilian channel]*. June 2023.

*Data analysis in R for marine ecologists*. (8 days online course, 18-28 April 2023).

*DNA, Ambiente e... Musica [DNA, Environment, and... Music]*. October 2022, Online Seminar in the series *Comunicare la Coscienza Ecologica [Communicating Environmental Consciousness]*, Italy.

*Small crustaceans in conservation biology: barcoding, fouling, and bioinvasion*. October 2022, Queen's University of Belfast, Northern Ireland, UK.

*DNA della Musica [DNA of Music]*. June 2022, University of Lodz, Poland.

*Biodiversità, dalla genetica alla bioinvasione, sonificando il DNA [Biodiversity, from the genetic to the bioinvasion, sonifying the DNA]*. April 2022, online lecture Liceo Statale "Enrico Medi", Italy .

*From seahorses to amphipods and from scientific diving to bioinformatic, what's next?* December 2021, University of Lodz, Poland.

*Studiando anfipodi, un viaggio intercontinentale per degli animali spesso ignorati... ["Studying amphipods, an intercontinental travel to study often ignored animals..."]*. December 2020, University of Bologna, Italy.

#### SCHOLARSHIPS AND GRANTS

BiOS UŁ 2022 training grant	<b>September 2022- November 2022</b>
IDUB grant: University of Lodz, Poland	<b>February 2021 – September 2023</b>
DAAD scholarship: AWI, Germany	<b>October 2018 - August 2019</b>
CNPq PhD grant: Federal University of Paraná, Brazil	<b>March 2017 - December 2020</b>
Erasmus + grant: University of Aveiro, Portugal	<b>March 2015 - September 2015</b>
Erasmus LLP grant: University of Coimbra, Portugal	<b>September 2011 - January 2012</b>

#### REVIEWER FOR INDEXED JOURNALS

Methods in Ecology and Evolution, Diversity and Distributions, Biological Invasions, Comparative Biochemistry and Physiology, Part A, Journal of Fish Biology, Aquatic Invasions, Hydrobiologia, Management of Biological Invasions, Mediterranean Marine Science, Zoology and Ecology, Diversity, Life, Journal of Marine Science and Engineering, Nauplius, Taxonomy, Pan-American Journal of Aquatic Sciences.

<http://www.webofscience.com/wos/author/record/H-3879-2018>

#### SUPERVISION

Krzysztof Podwysocki. Evaluation of the invasive potential of two genetically differentiated populations of the Ponto-Caspian amphipod - *Dikerogammarus villosus*. 2020 – ongoing. PhD thesis in exact and natural sciences - University of Lodz (Poland). Co-supervisor

Marilia D. Borges. Bioinvasão e epibiose nas comunidades do "biofouling" da baía de Paranaguá. 2021 – 2023. Thesis for Master in Zoology - Federal University of Paraná (Brazil). Co-supervisor

Gil Gilson Soares. Mangrove ecosystems – importance, threats and conservation. 2022. Monography for Bachelor in Biology – University of Lodz (Poland). Co-supervisor

Ely Vanessa Ferreira. Cirripedia (Arthropoda, Crustacea) epibiontes de tartarugas marinhas do litoral do estado do Paraná. 2018. Monography for Bachelor in Biology - Federal University of Paraná (Brazil). Co-supervisor

Valentina Laera. La popolazione di *Pinna nobilis* (Mollusca, Bivalvia) nel Mar Piccolo di Taranto. 2016. Thesis for Master in Environmental Biology - University of Bari (Italy). Co-supervisor

#### LANGUAGES

Italian — native language

English — C1

Portuguese — C1

#### LICENSES

3<sup>rd</sup> star CMAS/FIPSAS diver, Rescue diver, Nitrox diver, Oxygen Provider, BLS

#### OTHER

Part of the international team "ETH BiodivX" (<https://www.biodivx.org/>) semifinalist for the XPRIZE (2021-2024).

Vice-president of the cultural association CLabs (<https://www.culturelabs.it/home>).

Leader of scientific communication project “DNA della Musica” (<https://www.dnadellamusica.com/>).

2<sup>nd</sup> place at the EUDI MOVIE 2016 in the category "professional" with the video The Researcher. (Donghia, M.; Donghia, S.; Desiderato, L.; Corriere, P.; Desiderato, A.; Ranieri, M.).